

41. The process of claim 26 wherein the stitch bind composition has a viscosity of about 1 to about 1200 cps.

42. The process of claim 27 wherein the tufted primary backing comprises a fabric woven from tapes comprising polypropylene.

43. The process of claim 42 wherein the additional backing comprises a secondary backing fabric woven from polypropylene tapes or yarns.

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Sub B7 44. The process of claim 43 wherein the viscosity of the stitch bind composition is about 1.5 to about 400 cps.

45. The process of claim 27 wherein the additional backing comprises a secondary backing fabric woven from polypropylene tapes or yarns.

REMARKS

The restriction requirement and rejections set forth in the outstanding action, together with basis for the amendments to the claims, are discussed below. Where applicable, headings used below correspond to those in the action.

Election/Restrictions

In response to the requirement for restriction between Group I, claims 1-27, or Group II, claims 28-33, the provisional election of Group I, claims 1-27, by the undersigned during a telephone conversation with the Examiner, Mr. Goff II, on May 8, 2002, is affirmed.

Reconsideration of the requirement is requested in view of the single inventive concept reflected in both groups of claims. As explained in the background in the specification, a difficulty in carpets with thermoplastic binders is achieving tuft lock and fuzz resistance. The

method according to the Group I claims and the carpets according to the Group II claims both reflect a solution to that difficulty involving bonding of filaments of face yarn stitches with an organic polymer. In this regard, it also is noted that US 4,808,459, which is the primary reference applied in the prior art rejections of the subject application, contains claims to both carpets and methods for making them.

Accordingly, reconsideration and withdrawal of the restriction requirement is respectfully requested.

Information Disclosure Statement

An information disclosure statement listing the patents and publications that include those discussed in the specification is submitted herewith, together with copies of the listed materials, with the request that they be considered and made of record in the application.

Basis for Claim Amendments and New Claims

Independent claims 1 and 23-27 have been amended to incorporate recitations from claims 4 and 13 as originally filed with respect to viscosity of the stitch bind composition and amount of stitch bind composition and organic polymer or residue.

Independent claims 1 and 23-25 have also been amended to recite that the thermoplastic binder with softened or melted resin is contacted with the stitched side of the tufted backing by extruding the binder with melted resin into contact with the stitched side or by heating a binder applied to or present with the stitched side to soften or melt the resin. Claim 23 has also been amended to designate its steps with the letters A, B and C for greater

clarity, and the heating step according to claim 24 has been deleted in view of the added language. Support for the amendments is found in the description of thermoplastic binders and their use in the paragraph bridging pages 2-3 of the specification, and particularly page 2 line 32 to page 3 line 13, describing the binders and application thereof by extrusion of melted resin onto the stitched side of a backing (page 3 lines 8-10) and by heating to melt the resin of binders in solid form applied to or present with backings (page 3 lines 1-7). In addition or independently, support is found at page 37 line 13 to page 38 line 12, including the specific descriptions therein of contacting with the binder in solid form or with its resin softened or melted (page 37 lines 19-22; page 38 lines 5-11), and in solid form applied to or present as part of a backing or a stitched side of a tufted backing (page 37 lines 29 to page 38 line 6).

Independent claim 26 has also been amended to recite that the tufted backing includes thermoplastic binder in the form of a coating, fabric or fibers comprising solid thermoplastic resin that softens or melts at a temperature below a temperature at which the backing and face yarn are damaged by heat, and is present on at least the stitched side of the backing. The contacting step recited in the claim as originally filed has also been deleted in view of the amendment. Support for the amendment is found in the description at pages 37-38 as noted above and additionally page 39 lines 8-14, describing binders in the form of coatings, fibers and fibrous assemblies on one or both surfaces of a backing and page 45 lines 28-33 specifically describing binders applied to or incorporated into backings as a coating, fibers or fabric.

Dependent claims 4 and 13 have been amended to recite that the stitch bind composition has viscosities of about 1 to about 1200 cps and about 1.5 to about 400 cps, respectively. Support for these amendments is found at page 25 lines 8-10 of the specification describing the recited viscosities as preferred ranges.

Finally, new dependent claims 34-45 have been added to define more specifically certain aspects of their respective independent claims.

In greater detail, new claims 34-38 are ultimately dependent from claim 25. Claim 34 recites an additional step comprising bonding an additional backing to the stitched side of a tufted backing with thermoplastic binder as described at page 17 lines 16-25 and page 43 lines 16-23 of the specification. New claim 35 recites that the additional backing comprises a secondary backing woven from polypropylene tapes or yarns, as described at page 49 lines 13-22. New claim 36 is directed to additional backings that comprise a thermoplastic binder, as described at page 50 lines 1-6 and 53 lines 9-21. New claim 37 recites that the additional backing comprises a fabric woven from polypropylene tapes or yarns with a thermoplastic binder in the form of a nonwoven fabric or fibers comprising a thermoplastic resin needled thereto, as described at page 49 lines 13-22 with respect to the woven component and page 56 lines 9-14 with respect to binder in the form of fabric or fiber needled thereto. New claim 38 recites that the viscosity of the stitch bind composition is about 1.5 to about 400 cps and finds support as described above with respect to the amendment to claim 13.

New claims 39-41 are ultimately dependent from claim 26. Claim 41 recites that the thermoplastic binder is a

nonwoven fabric needled to the backing, as described at page 56 lines 9-14. New claim 40 is for backings that comprise fabric woven from tapes comprising polypropylene, as described at page 47 lines 23-28. New claim 41 is for stitch bind compositions with viscosities of about 1 to about 1200 cps as described above in connection with the amendment to claim 4.

New claims 42-45 ultimately depend from claim 27. Claim 42 recites that the tufted primary backing comprises a fabric woven from tapes comprising polypropylene, as described at page at page 47 lines 23-28. Claims 43 and 45 recite that the additional backing comprises a secondary backing fabric woven from polypropylene tapes or yarns, as described at 49 lines 13-22. Claim 44 recites that the stitch bind composition has a viscosity of about 1.5 to about 400 cps, as described above in connection with the amendment to claim 13.

Claim Rejections - 35 USC 102

Claims 1-3, 5, 6, 9, 14, 15, 18 and 23-26 have been rejected as anticipated by Smith et al. Reconsideration is requested.

Before discussing in detail the individual rejections and reasons for reconsideration thereof, Applicants' consider it appropriate to note that the process according to Applicants' invention is for manufacture of tufted carpets in which a thermoplastic binder is used to adhere stitches of face yarn disposed on a stitched side of a tufted backing, and also to adhere a secondary backing in some embodiments, and a stitch bind composition comprising a liquid component and an organic polymer component is applied to the stitches to improve fuzz resistance of the

tufts. Thermoplastic binders used according to the invention are applied by extruding melted resin into contact with the stitched side of the tufted backing, or by heating solid binder applied or present in contact with the stitched side to soften or melt the thermoplastic resin. On cooling of the resin of the binder, the resin bonds the stitches so that face yarn tufts resist being pulled out of the carpet structure. The stitch bind composition is of relatively low viscosity so that it wets and penetrates the filaments of the yarn forming the stitches. Heating to remove the liquid component of the stitch bind composition is conducted before the resin of the binder is solidified and results in bonding of filaments of stitches by the organic polymer component a residue thereof.

Smith does not anticipate any of Applicants' claims because it discloses carpet manufacture by conventional latex bonding techniques, in which bonding to anchor tufts is accomplished by drying a liquid latex formulation. The reference is silent about fuzz resistance of its carpets and also fails to disclose use of the claimed stitch bind composition, including the viscosity and application rate according to the amended claims.

Smith discloses carpets made by conventional latex bonding techniques with a latex of a polyvinylidene chloride-acrylic compound copolymer said to have thermoplastic adhesive properties. The patent emphasizes, and expressly requires, compatibility of its latex with conventional backcoat application and drying equipment and techniques in which liquid latex is applied to the back side of a tufted backing and then dried to form a tuft-lock coating (Col. 1 lines 56-60; Col. 3 lines 16-21). It also requires that the coating resulting from drying the latex

provide adhesion of the tufts to the backing (Col. 2 lines 28-36; Col. 3 lines 21-23) and that when heated to activate its thermoplastic adhesive properties for lamination of a secondary backing it not lose its tuft-bonding properties (Col 3 lines 23-28). To achieve tuft lock in carpets, Smith discloses that the latex is used in an amount that provides 12 to 32 ounces of dried coating per square yard. Col. 4 lines 59-65.

None of the claims of the subject application is anticipated by Smith because Smith does not disclose the claimed method. In particular, Smith does not disclose use of the stitch bind composition according to the claims. For example, unlike use of a stitch bind composition with viscosity of about 0.5 to about 3000 cps, as in independent claims 1 and 23-26, the only viscosity disclosed in Smith is the 5000 to 6000 cps range mentioned in the Example of the patent (Col. 6 lines 13-16). Moreover, in contrast to use of stitch bind composition in an amount effective to provide about 0.5 to about 3 ounces per square yard of organic polymer or residue thereof as in independent claims 1 and 23-26, Smith requires use of latex to provide a coating with 12-32 ounces per square yard dry weight (Col. 4 lines 59-62).

Smith also does not adhere stitches of face yarn to a stitched side of a tufted primary backing by cooling a thermoplastic binder with softened or melted thermoplastic resin in contact with the stitched side, as in the claims. Smith forms a tuft-lock coating by applying a liquid latex formulation and drying it, attributing tuft-lock to the dried coating. The coating is described as not losing its tuft-lock on heating to activate its thermoplastic

adhesiveness, but on the face of the reference, it is the dried coating to which tuft-lock is attributed.

In view of any of the differences discussed above, Smith clearly does not anticipate any of rejected claims 1-3, 5, 6, 9, 14, 15, 18 and 23-26 or any of the other claims of the application. Nonobviousness of the claims in view of Smith is also clear from those differences and evident from the outstanding action's failure to apply Smith alone to either of claims 4 or 13 in which the respective viscosity and application rate recitations now appearing in amended claims 1 and 23-26 were originally included.

Claim Rejections - 35 USC 103

Claims 4 and 13 have been rejected as obvious from Smith as applied in the anticipation rejection discussed above taken with Higgins et al. Reconsideration is requested.

Higgins is not properly combined or combinable with Smith, and even in combination the references do not make the claims obvious.

Higgins is not directed to carpets made from tufted backings. Rather, the patent specifically limits its disclosure to carpets in which tufts are bonded on the face or pile side and do not penetrate a backing. This is clear from the patent's drawing, all of the figures of which show backings with face yarn disposed on only one side of a backing. It also is clear from Higgins' description, for example, at Col. 2 lines 41-48, stating as follows:

"The pile fabrics of the present invention are heat tacked adhesive bonded fabrics which may be comprised of a liquid-permeable base layer, a pile forming yarn adjacent to but not tufted through the base layer, in pile forming, preferably folded fashion;" (Emphasis added.)

Higgins et al. describes bonding his pile yarn to the face side of the backing by both heat tacking and with a latex or hot melt adhesive formulation. The Examiner has specifically noted the patent's disclosure of binder application rates providing 4 to 70, and preferably about 6, dry ounces per square yard (Col. 8 lines 23-27). However, Higgins et al. also specifically notes that application of a 50% solids latex at wet weight of 12 ounces per square yard (which, at the 50% solids level, appears to yield the preferred 6 dry ounces per square yard) "is significantly less than that required when no heat tacking is utilized." Col. 3 lines 1-8.

Higgins et al. and Smith are not properly combinable because they are for significantly different types of carpets. Smith's are tufted, with face yarn penetrating a backing, while Higgins et al.'s are face bonded, with face yarn bonded to a backing on the face side of the carpet without penetration of the backing. Smith applies his latex on the backside, specifically calling for application rates of 12 to 32 dry ounces per square yard. Higgins et al.'s adhesive is applied to the back side of the backing but penetrates to the face side for bonding of face yarn which is already heat tacked to the face side of the backing. With these fundamental differences in the types and methods of making their respective carpets, there is no basis for use of Higgins et al.'s adhesive application rates or binder viscosities, especially given Smith's own express teachings with respect to those features.

In view of the above, neither claim 4 nor 13, nor any of the other claims of the application is obvious from Smith taken with Higgins et al.

Claims 6-8, 16 and 17 have been rejected as obvious in view of Smith et al. as applied in the anticipation rejection taken with Kato and Bogdany. Reconsideration is again requested.

Kato and Bogdany have been cited for their disclosures of applying liquids in carpet manufacture by spraying, as foams and froths, and Kato additionally for its disclosure of certain organic polymer compositions. However, neither reference is properly combinable with Smith or related to carpet manufacture using thermoplastic binders as in the claimed process. Neither contains any teaching that supplements those of Smith or Smith taken with Higgins et al. in such a way as to make the claims obvious.

Kato describes a foamable adhesive containing expandable polystyrene particles and a resin emulsion for laminating substrates, one of which may be a tufted carpet. Smith does not disclose foamable adhesives. Further, with Smith's emphasis on heating its adhesive after application and drying to activate thermoplastic adhesive characteristics, a foamable adhesive would be contrary to Smith because heating would be expected to collapse a thermoplastic foam. Use of Kato's cross-linking formulations for Smith's polyvinylidene chloride-acrylic copolymer would not provide a process such as those claimed because such a process would not involve use of a thermoplastic binder as claimed. In this regard, reference is made to page 12 lines 15-23 of Applicants' specification, in which the expression "thermoplastic binder" is defined as a material that comprises a thermoplastic resin and does not contain added thermosetting, crosslinked or crosslinkable components to

an extent that destroys or significantly reduces the resin's fundamental thermoplastic nature.

Bogdany discloses conventional, crosslinkable carboxylated styrene-butadiene copolymer latexes for carpet manufacture in which corn syrup is added as a stiffener. Like Kato, it has nothing to do with thermoplastic binders, nor with improving fuzz resistance of carpets made using such binders. Bogdany's latexes also differ significantly from those of Smith, in which thermoplastic adhesive characteristics are emphasized.

In view of the above, although Kato and Bogdany disclose particular liquid application techniques of the type recited in claims 6-8, differences between the reference's formulations that are applied by such techniques and those of the primary reference are such that application of the secondary references' teachings to Smith is not suggested and, in any event, does not make any of the claims obvious.

Claims 19-21 have been rejected as obvious in view of Smith applied as in the anticipation rejection taken with Kato, Bogdany and Reith. Reconsideration is requested.

Differences between Kato's and Bogdany's binder formulations and those of Smith weigh against proper combination of the references and, even if combined, do not make the claims obvious because the claimed process involves use of thermoplastic binders and a stitch bind composition, as discussed above.

Reith does not add anything relevant to the primary reference or its combination with any of the other cited references. Reith discloses carpet lamination with a composite, hot melt adhesive with greater and lower viscosity components that is applied in sheet form, as

disclosed at Col. 4 line 59 to Col. 5 line 5 of the reference. In contrast, Smith's binder is used as a liquid latex. In addition, Smith expressly discounts hot melt adhesives for carpet manufacture due to impracticality of expensive and specialized hot melt extruders (Col. 1 lines 39-55).

Accordingly, Smith taken with Kato, Bogdany and Reith do not make any of the claims obvious.

Claims 10-12, 22 and 27 have been rejected as obvious in view of Smith applied as in the anticipation rejection taken with Gerry, which is cited for its disclosure of face yarn compositions and of a moisture barrier film layer in carpets. Reconsideration is requested.

At the outset, from the explanation of this rejection in the second full paragraph of page 8 of the outstanding action, it appears that the additional backing used according to claim 27 has not been recognized by the Examiner as including a secondary backing. Such an interpretation is incorrect, as clearly seen from the description of additional backings at page 49 lines 3-38 of Applicants' specification.

Gerry, like the other secondary references cited in support of the various obviousness rejections of Applicants' claims, does not disclose manufacture of carpets using thermoplastic binders or improving fuzz resistance of carpets made with such binders. Gerry specifically discloses use of conventional latexes (Col. 2 lines 57- 67) and drying thereof after application (Col. 3 lines 1-8). Application rates of 10 to 40 ounces per square yard are also disclosed (Col. 3 lines 8-13).

Gerry also fails to disclose bonding of an additional backing to a stitched side of a tufted backing with a

thermoplastic binder according to the claims. Rather, Gerry applies its latex formulation to the back side of a tufted backing, separately adheres its moisture barrier film layer to a secondary backing, and laminates the moisture barrier film layer to the tufted structure with the latex formulation.

Accordingly, Smith taken with Gerry does not make obvious any of the claims.

Newly Cited Reference

As noted above, an Information Disclosure Statement is submitted herewith. In addition to the patents and publications referred to in Applicants' specification, the Statement also lists WO 98/38375, to which the Examiner's attention is directed in view of its disclosure of manufacture of tufted carpets with extrusion of a particular homogeneously branched linear ethylene polymer onto the back surface of a tufted primary backing to provide an adhesive backing. Page 32 line 38 to page 35 line 29, describe an embodiment in which an aqueous pre-coat of a polyolefin, such as ethylene vinyl acetate, polypropylene or polyethylene, and optional materials such as a surfactant, thickener, defoaming agent and dispersion enhancer, is applied before extrusion of the adhesive backing. Application of the pre-coat with a roll applicator or doctor blade is disclosed. Viscosity of the pre-coat is 3000 to 50,000 cps, and preferably about 10,000 to 20,000, as described at page 34 lines 16-20 and it is applied in amounts providing about 4 to about 12 ounces per square yard, as described at page 35 lines 12-20. Lamination of secondary backings to the backside of a tufted primary backing with the adhesive coating, either in

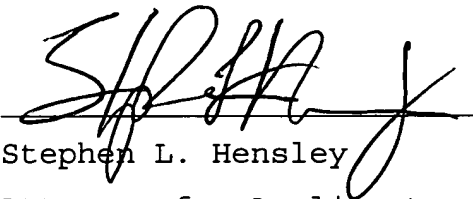
melted form or after solidification and remelting, also is disclosed at page 44 lines 5-18.

Although this published application discloses manufacture of tufted carpets using a particular thermoplastic binder and application of a liquid organic polymer composition, both the disclosed viscosity and application rates of the pre-coat material differ from the claimed process. Furthermore, use of thermoplastic binders applied or present in solid form according to claims 1 and 23-25 is not disclosed, nor are binders in the form of fabrics, coatings or fibers according to claim 26.

Conclusion

In view of the amendments made herein and the foregoing reasons for reconsideration of the rejections, it is submitted that the claims of the subject application are patentable over the cited references and the application is in condition for allowance; accordingly, such action is respectfully requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'S. L. Hensley', is written over a horizontal line.

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Amended and New Claims, with additions underlined and deletions bracketed

1. (amended) In a process for manufacture of tufted carpets comprising steps that comprise adhering to a stitched side of a tufted primary backing a plurality of stitches of face yarn comprising a plurality of filaments by applying a thermoplastic binder comprising a softened or melted thermoplastic resin into contact with the stitched side by (a) extruding the binder with melted thermoplastic resin into contact with the stitched side or (b) heating the binder applied or present in solid form in contact with the stitched side to soften or melt the thermoplastic resin, and cooling the thermoplastic binder in contact with the stitched side [a thermoplastic binder comprising a softened or melted thermoplastic resin] to solidify the resin, the improvement comprising steps that comprise applying to a plurality of the stitches, before the resin solidifies, a stitch bind composition having a viscosity of about 0.5 to about 3000 cps and comprising a liquid component that boils or vaporizes at a temperature such that it can be removed by heating below a temperature at which the tufted backing is damaged by heat and an organic polymer component that bonds filaments of the stitches on removal of the liquid component, wherein the stitch bind composition is applied in an amount effective to provide about 0.2 to about 3 ounces of the organic polymer component or a residue thereof per square yard of the stitched side; and, after applying the stitch bind composition but before the resin solidifies, heating the

stitch bind composition to substantially remove the liquid component without damaging the tufted backing.

4. (amended) The process of claim 1 wherein the stitch bind composition has a viscosity of about [0.5 to about 3000] 1 to about 1200 cps.

13. (amended) The process of claim 1 wherein the stitch bind composition [is applied to the stitched side in an amount effective to provide about 0.2 to about 3 osy of the organic polymer component or residue thereof to the stitched side] has a viscosity of about 1.5 to about 400 cps.

23. (amended) A process for manufacture of carpets comprising the steps of (A) providing a tufted backing having a stitched side that has a plurality of stitches of face yarn comprising filaments, wherein filaments of a plurality of the stitches are bonded with an organic polymer which is present at about 0.2 to about 3 ounces per square yard of the stitched side; (B) contacting the stitched side of the tufted backing with a thermoplastic binder comprising a thermoplastic resin that softens or melts at a temperature below a temperature at which the tufted backing is damaged by heat or that, when softened or melted, can contact the tufted backing without such damage[;], wherein the binder with the thermoplastic resin thereof in softened or melted form is applied into contact with the stitched side by (1) extruding the binder with melted thermoplastic resin into contact with the stitched side or (2) heating the [thermoplastic] binder applied or present in solid form in contact with the stitched side to soften or melt the thermoplastic resin, without damaging the tufted backing; and (C) cooling the backing with

softened or melted resin in contact with the stitched side to solidify the resin.

24. (amended) In a process for making carpets that comprises steps comprising:

providing a tufted backing comprising a backing and having a pile side and an opposite stitched side, wherein the pile side has a plurality of tufts of face yarn that comprise a plurality of filaments and the stitched side has a plurality of stitches of the face yarn;

contacting the stitched side of the tufted backing with a thermoplastic binder that comprises a thermoplastic resin that softens or melts at a temperature below a temperature at which the tufted backing is damaged by heat or that, when softened or melted, can contact the tufted backing without such damage, wherein the binder is applied into contact with the stitched side by (a) extruding the binder with melted thermoplastic resin into contact with the stitched side or (b) heating the binder applied or present in solid form in contact with the stitched side to soften or melt the thermoplastic resin, without damaging the tufted backing; and

[heating the thermoplastic binder to soften or melt the thermoplastic resin without damaging the tufted backing;]

cooling the thermoplastic binder with the softened or melted resin thereof in contact with at least the stitched side of the tufted backing to solidify the thermoplastic resin;

the improvement comprising steps that comprise:

applying to a plurality of stitches, before the softened or melted resin solidifies, a stitch bind composition that has a viscosity of about 0.5 to about 3000

cps and comprises a liquid component that boils or vaporizes at a temperature such that it can be removed by heating below a temperature at which the tufted backing is damaged by heat and an organic polymer component that bonds filaments of the stitches on removal of the liquid component, wherein the stitch bind composition is applied in an amount effective to provide about 0.2 to about 3 ounces of the organic polymer component or a residue thereof per square yard of the stitched side; and

after applying the stitch bind composition but before the softened or melted resin solidifies, heating the stitch bind composition to remove the liquid component without damaging the tufted backing.

25. (amended) A process for making carpets comprising steps that comprise:

adhering to a stitched side of a tufted backing a plurality of stitches of face yarn comprising a plurality of filaments by cooling in contact with the stitched side a binder comprising a softened or melted thermoplastic resin to solidify the resin, wherein the binder with the thermoplastic resin thereof in softened or melted form is contacted with the stitched side by (a) extruding the binder with melted thermoplastic resin into contact with the stitched side or (b) heating the binder applied or present in solid form in contact with the stitched side to soften or melt the thermoplastic resin;

applying to a plurality of stitches, before the resin solidifies, a stitch bind composition having a viscosity of about 0.5 to about 3000 cps and comprising a liquid component that boils or vaporizes at a temperature such that it can be removed by heating below a temperature at

which the tufted backing is damaged by heat and an organic polymer component that bonds filaments of the stitches on removal of the liquid component, wherein the stitch bind composition is applied in an amount effective to provide about 0.2 to about 3 ounces of the organic polymer component or a residue thereof per square yard of the stitched side; and

heating the stitch bind composition, after application thereof to the stitches and before the resin solidifies, to remove the liquid of the stitch bind composition.

26. (amended) A process for making a tufted carpet comprising steps that comprise

providing a tufted backing comprising a backing, [and] face yarn comprising a plurality of filaments, and a thermoplastic binder in the form of a coating, fabric or fibers comprising solid thermoplastic resin that softens or melts at a temperature below a temperature at which the backing and face yarn are damaged by heat, wherein face yarn penetrates the backing and forms a pile surface comprising a plurality of tufts on one side of the backing and a plurality of stitches on an opposite, stitched side of the backing, and the thermoplastic binder is present on at least the stitched side of the backing;

applying to the stitched side of the tufted backing and in contact with a plurality of the stitches a stitch bind composition having a viscosity of about 0.5 to about 3000 cps and comprising a liquid component that boils or vaporizes at a temperature such that it can be removed by heating below a temperature at which the tufted backing is damaged by heat and an organic polymer component that bonds filaments of the stitches on removal of the liquid component, wherein the stitch bind composition is applied

in an amount effective to provide about 0.2 to about 3 ounces of the organic polymer component or a residue thereof per square yard of the stitched side;

[contacting the stitched side of the tufted backing with a binder comprising a thermoplastic resin that softens or melts at a temperature below a temperature at which the tufted backing is damaged by heat or that, when softened or melted, can contact the tufted backing without such damage;]

heating the tufted backing in contact with the stitch bind composition to remove the liquid component without damaging the tufted backing;

heating the binder to soften or melt the thermoplastic resin without damaging the tufted backing; and

cooling the binder with the softened or melted resin thereof in contact with the stitched side of the tufted backing to solidify the resin.

27. (amended) A process for manufacturing carpets comprising steps that comprise

providing a tufted primary backing having a pile side comprising face yarn tufts and an opposite side having a plurality of stitches of face yarn;

applying to a plurality of the stitches a stitch bind composition having a viscosity of about 0.5 to about 3000 cps and comprising a liquid component that boils or vaporizes at a temperature such that it can be removed by heating below a temperature at which the tufted backing is damaged by heat and an organic polymer component that bonds filaments of the stitches on removal of the liquid component, wherein the stitch bind composition is applied in an amount effective to provide about 0.2 to about 3

ounces of the organic polymer component or a residue thereof per square yard of the stitched side;

contacting the tufted primary backing, an additional backing and a binder comprising a thermoplastic resin that softens or melts at a temperature below a temperature at which the tufted primary backing and the additional backing are damaged by heat or that, when softened or melted, can contact the tufted primary backing and the additional backing without such damage, to form an intermediate structure having binder disposed between the stitched side of the tufted primary backing and the additional backing;

heating the tufted primary backing or the intermediate structure after application of the stitch bind composition to remove the liquid component without damaging the tufted primary or additional backing;

heating the binder to soften or melt the thermoplastic resin without damaging the tufted backing or the additional backing; and

cooling the intermediate structure with the thermoplastic resin in softened or melted form to solidify the resin.

34. (new) The process of claim 25 further comprising an additional step comprising contacting the stitched side of the tufted backing, the thermoplastic binder and an additional backing with the binder disposed between the stitched side and the additional backing such that the additional backing is bonded to the stitched side on cooling of the binder to solidify the resin.

35. (new) The process of claim 34 wherein the additional backing comprises a secondary backing woven from polypropylene tapes or yarns.

36. (new) The process of claim 34 wherein the additional backing comprises a thermoplastic binder.

37. (new) The process of claim 34 wherein the additional backing comprises a fabric woven from polypropylene tapes or yarns with a thermoplastic binder in the form of a nonwoven fabric or fibers comprising a thermoplastic resin needled thereto.

38. (new) The process of claim 25 wherein the stitch bind composition has a viscosity of about 1.5 to about 400 cps.

39. (new) The process of claim 26 wherein the thermoplastic binder is a nonwoven fabric needled to the backing.

40. (new) The process of claim 39 wherein the backing comprises a fabric woven from tapes comprising polypropylene.

41. (new) The process of claim 26 wherein The process of claim 1 wherein the stitch bind composition has a viscosity of about 1 to about 1200 cps.

42. (new) The process of claim 27 wherein the tufted primary backing comprises a fabric woven from tapes comprising polypropylene.

43. (new) The process of claim 42 wherein the additional backing comprises a secondary backing fabric woven from polypropylene tapes or yarns.

44. (new) The process of claim 43 wherein the viscosity of the stitch bind composition is about 1.5 to about 400 cps.

45. (new) The process of claim 27 wherein the additional backing comprises a secondary backing fabric woven from polypropylene tapes or yarns.